



APM 6007-Kv320

SPARROW SERIES

KEY FEATURES



Superior quality insulation provides long life and high reliability of windings



Ultra-light, efficient, and long flight time



Built for industrial strength



Fully tested



DATASHEET

Fly Higher. Fly Longer. Fly Smarter.

ePropelled brushless air propulsion motors (APMs), with outstanding thrust-to-weight ratios, drive a wide range of uncrewed aerial vehicles (UAVs) applications where weight, size, energy efficiency, high heat tolerance, and rugged quality count most.

For new UAV designs or easy replacement uses, ePropelled Sparrow APMs are designed from years of experience in magnetic engineering and materials science to deliver long life with ease of installation. When paired with our air motor controllers, gain high-performance, high-efficiency propulsion solutions for all manner of medium-duty UAV designs.

Air Propulsion Motor

The frameless Sparrow APM 6007-Kv320 delivers the thrust agility to drive demanding payload UAVs with precise control across dynamic mission parameters in demanding thermal environments.

They make an excellent choice to swap out commodity propulsion motors and attain better performance, greater life, longer range, and far higher operational integrity.

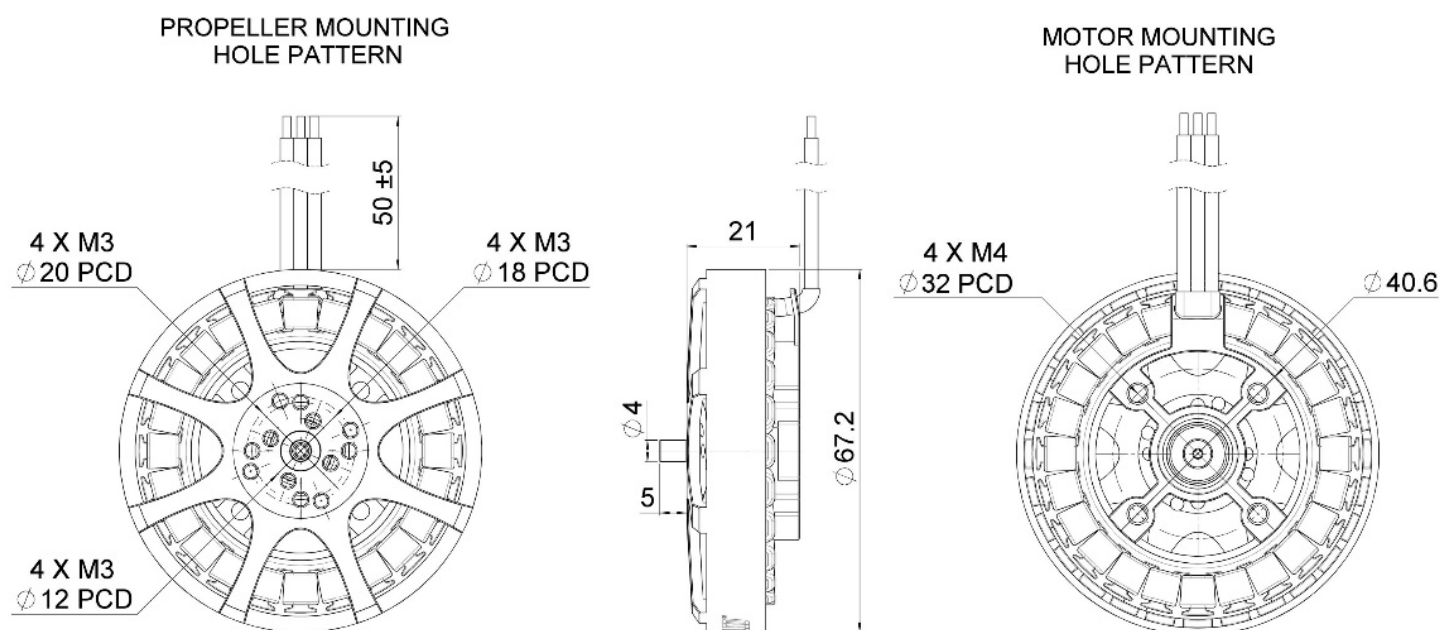
Compact and energy efficient on demand, the medium-duty APM 6007-Kv320 have a proven record of durability, reliability, and easily optimized performance across most mainstream UAV uses.



MOTOR PARAMETERS

PARAMETERS	MEASUREMENT
Kv (Velocity Constant)	320 Kv
Rated Voltage	4S - 6S
Peak Current (180s)	44 A
Maximum Power (180s)	998 W
Internal Resistance	47.5 mΩ
Nominal Operational Speed	0 to 6,000 RPM
Maximum Speed Limit	7,000 RPM
Magnetic Poles	28
Stator Slots	24
Winding Operating Temperature Allowed up to	150°C/302°F
Rotor Operating Temperature Allowed up to	150°C/302°F
Motor Diameter	67.2 mm
Motor Length	26 mm
Motor Weight	159 g
Motor Mounting Pitch Circle Diameter (PCD) 4 x M4	32 mm
Propeller Mounting Pitch Circle Diameter (PCD)	Adaptor dependent
IP Rating	IP25
Recommended Propeller	18" to 22" inch
Recommended ESC	AMC 6S40A series

MECHANICAL DIMENSIONS

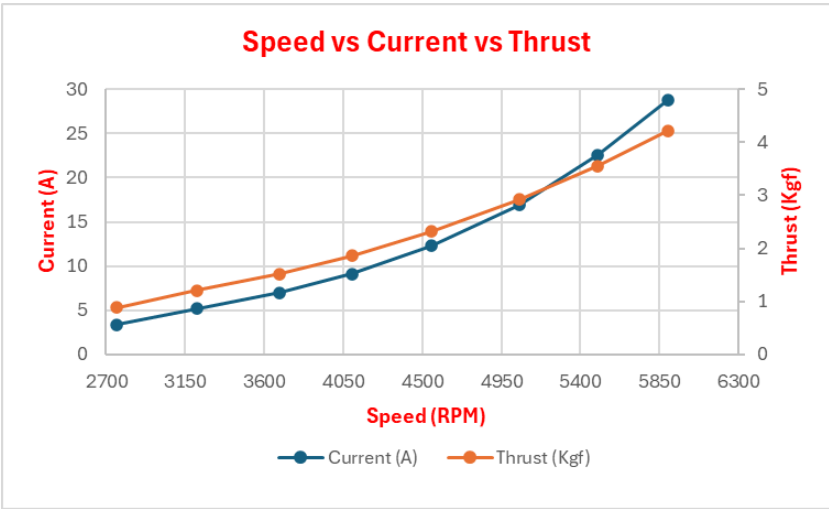
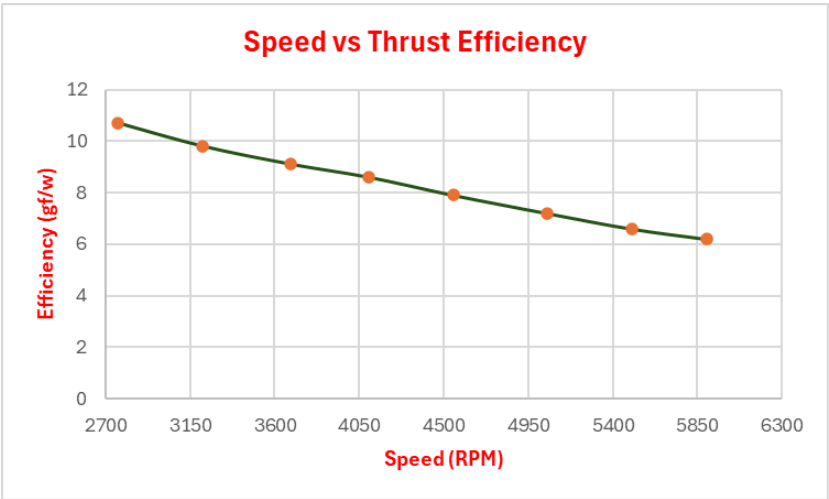


*All Dimensions are in mm

PERFORMANCE DATA: APM 6007-Kv320 (18.5” x 6.3”)

Motor Test Conditions	APM 6007-Kv320
Relative Humidity (%)	42
Ambient Temperature °C	26
Atmospheric Pressure (mB)	1013
Air Density (kg/m ³)	1.18

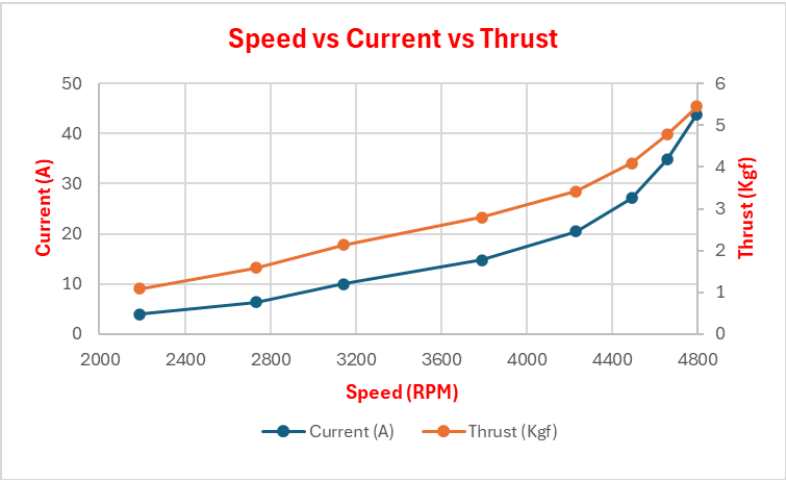
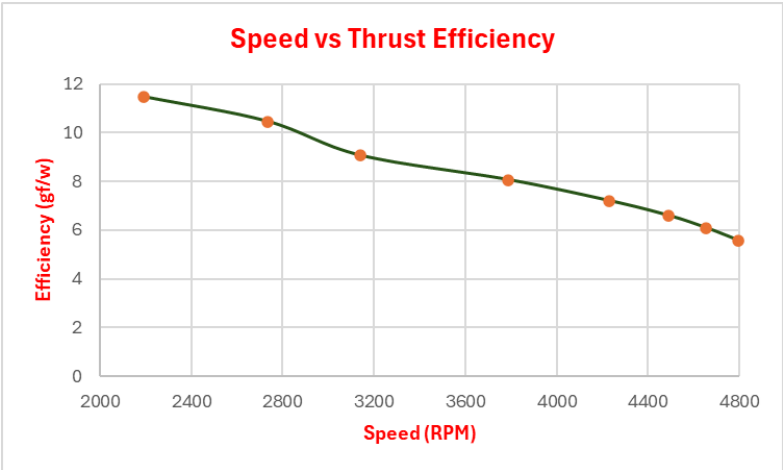
TYPE	PROPELLER	VOLTAGE	THROTTLE	MOTOR SPEED	SUPPLY CURRENT	ELECTRICAL POWER	THRUST	THRUST EFFICIENCY
		VOLTS	%	RPM	AMPS	WATT	KGF	GF/W
APM 6007-Kv320	(18.5” x 6.3”)	24.1	30	2762	3.4	82	0.88	10.7
		23.9	40	3216	5.2	124	1.21	9.8
		23.9	50	3688	7.0	167	1.52	9.1
		23.9	60	4100	9.1	217	1.86	8.6
		23.9	70	4550	12.3	294	2.32	7.9
		23.9	80	5050	16.9	403	2.92	7.2
		23.8	90	5500	22.6	537	3.56	6.6
		23.7	100	5900	28.8	683	4.22	6.2



PERFORMANCE DATA: APM 6007-Kv320 (21.5” x 7.3”)

Motor Test Conditions	APM 6007-Kv320
Relative Humidity (%)	45
Ambient Temperature °C	24
Atmospheric Pressure (mB)	1015
Air Density (kg/m ³)	1.15

TYPE	PROPELLER	VOLTAGE	THROTTLE	MOTOR SPEED	SUPPLY CURRENT	ELECTRICAL POWER	THRUST	THRUST EFFICIENCY
		VOLTS	%	RPM	AMPS	WATT	KGF	GF/W
APM 6007-Kv320	(21.5” x 7.3”)	23.9	30	2190	4.0	95	1.09	11.47
		23.8	40	2732	6.4	151	1.58	10.46
		23.6	50	3141	10.0	236	2.14	9.06
		23.4	60	3789	14.8	347	2.80	8.06
		23.2	70	4230	20.5	475	3.42	7.20
		22.9	80	4491	27.1	620	4.09	6.59
		22.6	90	4656	34.8	786	4.78	6.08
		22.3	100	4796	43.9	979	5.45	5.57



Note: All specifications are subject to change without notice. For more information, including ordering products, please contact us at info@epropelled.com | Phone: +1 (603) 236 7444

